Aino™
U10i, U10a

Sony Ericsson
make.believe

Purpose of this document

Sony Ericsson product White papers are intended to give an overview of a product and provide details in relevant areas of technology.

Document history

Version		
May 2009	First released version	Revision 1
June 2009	Second released version	Revision 2
September 2009	Third released version	Revision 3

Sony Ericsson Developer World

For the latest Sony Ericsson technical documentation and development tools, go to *www.sonyericsson.com/developer*

Table of contents

Product overview

Sound and vision set free

Is music your food of love? Love video up close? Or picture yourself as a photographer? With Aino all your entertainment is just a touch away. Watch the action from the crystal clear 3-inch screen and serve up seriously soulful sounds through the Bluetooth™ headset.

Simply more fun
Media Go™ helps you transfer, play and organise all your audio, photos, videos and podcasts the way you want from your PC, simply and effortlessly. Enjoy them directly in your phone in the best-quality format with Media Home. No more wires, no more searching, always the latest fun direct via Wi-Fi™.

Make your day – with Remote Play
Get interactive entertainment on your phone. Connect to PLAYSTATION®3 in your home, or over the Internet or a 3G network* from wherever you are in the world. Use Remote Play on Aino to control PLAYSTATION®3 and enjoy your favourite photos, music and videos.

The perfect match
Stunningly stylish, you'll want to showcase your Aino with its matching desk stand charger and Bluetooth™ headset so it takes pride of place in your home.

Facts – dimensions, performance and networks

Size	104 x 50 x 15.5 mm
Weight	134 grams
Available colours	Obsidian Black Luminous White
Main screen	
Colours	16,777,216 colour TFT
Resolution	432x240 pixels
Size (diagonal)	3 inches
Material	Mineral glass
Memory	
Phone memory	Up to 55 MB
Memory card support	SanDisk microSD™
Networks	
Aino U10i	UMTS HSPA 900 (Band VIII), 2100 (Band I) GSM GPRS/EDGE 850, 900, 1800, 1900
Aino U10a	UMTS HSPA 850 (Band V), 1900 (Band II), 2100 (Band I) GSM GPRS/EDGE 850, 900, 1800, 1900
Data transfer speeds	
GSM GPRS (Class 10 CS4)	Up to 80 kbps (download). Up to 40 kbps (upload)
GSM EDGE (Class 10 MCS9)	Up to 247 kbps (download). Up to 123 kbps (upload)
UMTS HSPA (upload)	Up to 2 Mbps (uplink, HSUPA, cat 5)
UMTS HSPA (download)	Up to 7.2 Mbps (downlink, HSDPA, cat 8)
Talk time (GSM)	Up to 9 hours 24 mins Up to 4 hours 22mins (4.36 hours) according to GSM Association Battery Life Measurement Technique
Standby time (GSM)	Up to 332 hours Up to 275 hours according to GSM Association Battery Life Measurement Technique
Talk time (UMTS)	Up to 4 hours 31 min Up to 3 hours 36 mins (3.61 hours) according to GSM Association Battery Life Measurement Technique
Standby time (UMTS)	Up to 346 hours Up to 306 hours according to GSM Association Battery Life Measurement Technique

Full feature list – categorised list of features

Camera
8.1 megapixel touchscreen camera
16x digital zoom
Auto focus
Face detection
Geo tagging
Photo feeds
Photo fix
Photo flash
Photo light
Picture blogging
Red-eye reduction
Smart contrast
Touch focus
Video blogging
Video recording
Video stabiliser

Music
Album art
Bluetooth™ stereo (A2DP)
Clear bass
Clear stereo
Touchscreen media player
MEGA BASS™
Music tones (MP3/AAC)
PlayNow™
PlayNow™ plus
SensMe™
Shake control
Stereo speakers
TrackID™

Web
Access NetFront™ Web browser 3.5
Bookmarks
Download Manager
Mouse pointer
Google™ search
Pan & zoom (page overview mode)
Web feeds
Web search (from standby)
HTML 4.01
XHTML™ 1.1

Communication
Call list
Conference calls
Polyphonic ringtones
Speakerphone
Vibrating alert
Video calling (main camera)

Messaging
Conversations
Email
Exchange ActiveSync®
Picture messaging (MMS)
Predictive text input
Sound recorder
Text messaging (SMS)
Unified messaging

Design
Activity menu key
Auto rotate
Media browser
Navigation key
Picture wallpaper
Touchscreen multimedia
Wallpaper animation

Entertainment
3D games
FM radio with RDS
Java
Tracker
Video streaming
Video viewing
Walk mate

Organiser
Alarm clock
Calculator
Calendar
Flight mode
Notes
Phone book
Stopwatch
Tasks
Timer

Connectivity
A-GPS
Bluetooth™ technology
DLNA™ Certified
Google Maps™
Modem
PictBridge™
Synchronisation
USB mass storage
USB support
Wi-Fi™

Technologies in detail

***NOTE**: The information outlined below is general and levels of ompliance to standards and specifications may vary between products and markets. For more information, contact Sony Ericsson Developers World or your Sony Ericsson contact person where applicable.

Device-to-device communications (local)

Bluetooth™ wireless technology

Bluetooth™ profiles supported	Advanced Audio Distribution Profile Audio/Video Remote Control Profile Basic Imaging Profile Dial-up Networking Profile File Transfer Profile Generic Access Profile Generic Object Exchange Profile Handsfree Profile Headset Profile Object Push Profile Personal Area Networking Profile Phonebook Access Profile Serial Port Profile Synchronisation Profile SyncML™ OBEX binding
Connectable devices	All products supporting Bluetooth spec. 1.1, or higher, and at least one of the profiles above

More information:

www.sonyericsson.com/developer

www.bluetooth.com

DLNA (Digital Living Home Alliance)

DLNA is a term used to describe an inter-device media transfer technology. Designed to allow an array of devices in the home to communicate and share content and experiences. DLNA devices can include Hi-Fi equipment, TVs and PCs

Supported Device Classes	DMS – Digital Media Server Media Types: Music, Images, Video Summary: The digital media server exposes the media files in your phone to a Wi-Fi network. The media can then be accessed from a DLNA client such as a PS3 or even another phone. DMP – Digital Media Player Media Types: Music Summary: The digital media player lets you access music that is stored on a DLNA DMS (digital media server) and play it in your phone. DMC – Digital Media Controller Push Controller for Images, Music Summary: The push controller allows the user to stream local content in the phone to a compatible rendering device such as a BRAVIA™ TV, or a compatible stereo system.
Supported Bearers	Wi-Fi™
DRM Support	The Sony Ericsson DLNA implementation does not support DRM protected content.

Wi-Fi™

Wi-Fi™ is a popular wireless networking technology that uses radio waves to provide wireless high-speed Internet and network connections. Wi-Fi™ hotspots exist in an increasing number of locations for example airports, hotels, cafés and bistros. If a mobile phone supports Wi-Fi™, it can take advantage of high data transfer rates and lower calling costs.

Supported standards	Wi-Fi™ certified. When applicable, 802.11g is prioritised over 802.11b.
Connectable devices	Wi-Fi™ access points
Frequency band	2.4 GHz
Data transmission rate	5 Mbps
Security	Open Open WEP Shared WEP WPA Personal and WPA2 Personal WPA Enterprise and WPA2 Enterprise
Encryption	TKIP and AES
Power save	WMM-UAPSD QoS, WMM

Java™

Java™ Platform, Micro Edition	JSR-75 PDA Optional Packages for J2ME™ JSR-82 Bluetooth Wireless Technology API JSR 118 MIDP 2.0 JSR-120 Wireless Messaging API JSR-205 Wireless Messaging API 2.0 JSR-135 Mobile Media API 1.1 JSR 139 CLDC 1.1 JSR-172 J2ME™ Web Services Specification JSR-177 Security and Trust Services API for J2ME™ JSR-180 SIP API for J2ME™ JSR-184 Mobile 3D Graphics API for J2ME™ JSR 185 Java™ Technology for the Wireless Industry JSR-211 Content Handler API JSR-226 SVG API for J2ME™ JSR-229 Payment API JSR-234 Advanced Multimedia Supplements JSR-238 Mobile Internationalization API JSR-239 OpenGL ES JSR-248 Mobile Services Architecture JSR-256 Mobile Sensor API (accelerometer) Nokia UI Extension API
Java 3D	Mascot Capsule Micro3D Version 3 JSR-239 OpenGL ES JSR-184 Mobile 3D Graphics API for J2ME™

Messaging

(MMS) Multimedia Messaging Service

According to OMA Multimedia Messaging Service v1.2 + SMIL

Email

Bearer type (IP)	GSM Data (IP) GPRS and HSCSD
Character sets	USASCII UTF-7 UTF-8 UTF-16 UTF-17LE UTF-16BE UCS-2 / ISO10646 UCS2 ISO-8859-1 ISO-8859-2 Eastern Europe ISO-8859-5 Cyrillic ISO-8859-7 Greek ISO-8859-9 Turkish ISO-8859-10 Nordic ISO-8859-11 Thai ISO-8859-15 Western MR5 KOI8 GB18030 Simplified Chinese GB2312 Simplified Chinese BIG5 ISO2022JP Windows 1251 Cyrillic Windows 1252 Windows 1254 Turkish Windows 1255 Hebrew Windows 1258 Vietnamese Shift JIS Note: GB2312 is only available in Simplified Chinese variants, that is, Mainland China variants. BIG5 is only available in Traditional Chinese variants, that is, Hong Kong and Taiwan variants.
OTA provisioning solution	OMA Client Provisioning 1.1
Protocols	POP3 and IMAP4
Push email	IMAP IDLE (extension of IMAP4 Rev1), OMA Email Notification 1.0 and scheduled checking, Microsoft Exchange ActiveSync® (EAS)
Secure email	SSL/TLS, both port methods (POPS/IMAPS) and START-TLS
HTML mail	Yes

More information:

www.sonyericsson.com/developer

www.openmobilealliance.org

Positioning – location based services

Supported standards

JSR-179 (Location API 1.0)

OMA Secure User Plane Location (SUPL) v1.0

3GPP Control Plane location (incl. Emergency location)

Provisioning (OMA CP, OMA DM)

OMA CP version 1.1

OMA DM version 1.2

Related information:

www.sonyericsson.com/developer

Synchronisation (OMA DS, EAS)

OMA Data Synchronisation protocol versions 1.1.2 and 1.2

OMA Data Formats: vCard 2.1, vCalendar 1.0, vBookmark 1.0, notes as text/plain

Microsoft Exchange ActiveSync® protocol version 2.5

Related information:

www.sonyericsson.com/developer

Multimedia (audio and video)

Audio Playback	Decoder format	Supported in file format
	Audio decoding MPEG-1/2/2.5, audio layer 3	MP3 (.mp3)
	AAC, AAC+, eAAC+	3GP (.3gp); AAC (.aac); MP4 (.mp4, .m4a)
	AMR-NB	3GP (.3gp); AMR (.amr)
	AMR-WB	3GP (.3gp); AMR (.amr) ; AMR-WB (.awb)
	AMR-WB+	3GP (.3gp); AMR (.amr) ; AMR-WB (.awb)
	WMA version 2,7,8: Class 1	WMA (.wma)
	WMA version 9: Level 3	WMA (.wma)
	WMA Pro (profile M0a)	WMA (.wma)
	General MIDI (GM)	SMF (.mid)
	GML	SMF (.mid)
	SP-MIDI	SMF (.mid); XMF (.xmf, .mxmf)
	DLS (Mobile DLS supported)	XMF (.xmf)
	Linear/A-law/.-law PCM	WAV (.wav)
	iMelody	iMelody (.imy)
Audio Recording	**Encoder format**	**Supported in file format**
	AMR-NB	AMR (.amr)
	AAC-LC	MP4 (.m4a)
Video Playback	**Decoder format**	**Supported in file format**
	MPEG-4 Visual Simple Profile	3GP (.3gp); MP4 (.mp4)
	H.264 Baseline Profile	3GP (.3gp); MP4 (.mp4)
	H.263 Profile 0	3GP (.3gp)
	VC-1 (WMV9)	ASF (.asf, .wmv)
Video Recording	**Encoder format**	**Supported in file format**
	- Video: H.263 Profile 0	3GP (.3gp)
	- Audio: AMR-NB"	
	- Video: MPEG-4 Visual Simple Profile	MP4 (.mp4)
	- Audio: AAC-LC"	
Audio/Video Streaming	Streaming transport	RTSP according to 3GPP™
DRM	DRM (Digital Rights Management) features the rights and copy protection of downloaded content.	OMA DRM 1.0, 2.0, 2.1 Microsoft DRM 10

Web browser

Browser version	Access NetFront 3.5
Bookmarks	Folders and sorting supported
Bookmark export/import	Bookmarks can be sent and received using vBookmark format and Bluetooth™, SMS, MMS and email
Navigation/rendering	Pan & Zoom (page overview mode) Landscape/portrait rendering Full page PC rendering
Search	Internet Search Find on page
Browser compliancy	HTML 5.0 Canvas HTML version 4.01 XHTML Basic version 1.0 XHTML version 1.1 XHTML Mobile Profile version 1.1 WML 1.3 CSS 2.1 WCSS Version 26-Oct-2001 ECMA-script 262 3rd edition ECMAScript Mobile Profile 1.0 HTTPXMLRequest AJAX DOM 2.0 SVG Tiny, version 1.2
Browser plugin	SVG-T Flash Lite Audio/Video
Web feeds	Feeds detection in Browser Feeds reader Podcasting
Web albums	Publish to Picasa Publish to a social site Publish to Blogger Publish to Flickr
Protocol Compliancy	HTTP/1.1 TLS 1.0 and SSL 3.0 OMA Download 1.0 RSS 2.0

Related information:

www.access-company.com/products/mobile_solutions

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